

# **The Measurement of Morale among Belgian Military Personnel Deployed in Crisis Response Operations: A Longitudinal Survey Design<sup>1</sup>**

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## **MEASUREMENT OF MORALE**

*The measurement of morale is of interest in every mission, especially during Crisis Response Operations. This paper shows how a sociological survey may measure this concept, and how it relates to socio-demographical variables.*

### **1.0 INTRODUCTION**

Soldiers' morale has been for a long time ago of interest among military leaders (Manning, 1991). In this respect, it is extremely important for military commanders to investigate, and eventually be able to take corrective action during Crisis Response Operations.

However, although this concept is important for military leaders, there is little agreement about its definition (Gal, 1986; Gal & Manning, 1987; Motowildo & Borman, 1977, 1978). Nevertheless, three elements seem to play an important role in it: soldiers' motivation, satisfaction and group cohesiveness (Motowildo & Borman, 1978).

The goal of this paper is to report results from periodic surveys of Belgian military personnel carried out for the Mental Readiness Advisor of the Defence Staff by the Department of Behavioral Sciences of the Royal Military Academy.

These periodic surveys serve to evaluate indicators of well-being during Crisis Response Operations. Before 2005, data collection methods were not standardized (the survey instrument differed from mission to mission) and there was no central database, making it impossible to analyze trends and compare units and missions. So, to remedy this situation, the Belgian Defence Staff decided, in 2005, that the existing questionnaires used to investigate well-being before, during and after Crisis Response Operations should be standardized. On the basis of the previous ones, a new standardized sociological survey instrument was

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constructed. Contrary to psychologists who make extensive use of psychological scales to approach latent constructs, most sociologists tend to use single items to evaluate constructs. The main advantage of single items questions is that more questions, and therefore areas of interests, may be investigated; the disadvantage, however, is the relative lack of reliability, of range of the latent concept they explore in comparison with scales.

The questionnaire developed for the Belgian Defence Staff is oriented towards the collection of practical information and is therefore not designed to meet psychometric criteria like validity or reliability. Nevertheless, we found in this survey items related to morale defined as a tripartite model including soldiers' satisfaction, motivation and group cohesiveness. The aim of this paper is to show how, a priori, we can derive information related to morale in order to inform commanders from a questionnaire not constructed specifically to measure this concept.

## **2.0 METHOD**

The present paper presents results from data collected in 2005. Its purpose is not so much to analyze all the survey waves already carried out, but rather to illustrate the usefulness of the instrument. We extract for this report, data from four contingents deployed in 2005. In this way, this paper must be seen as a preliminary study of morale within the Belgian Army.

As indicated above, the aim of the survey instrument is to evaluate the well-being of military personnel during missions abroad, and this not only in a cross-sectional manner (each mission separately) but also on a longitudinal basis (in order to be able to assess some of the causes of the observed variations). The questionnaire is administered during the mission (approximately at the half of the mission – every mission lasting four months) to all military personnel of every contingent in operations abroad. The standardized questionnaire comprises 119 items forming 34 questions linked to five main topics: socio-demographic data, satisfaction with the mission, morale level, discipline and intercultural relationships on the theatre of operations. Single item-scales are used for every sub-topic.

The data analysed in this report cover four sample waves. Two of them were carried out in Afghanistan (ISAF6 and ISAF7), and the remaining two in Kosovo (BELUKOS 17 and BELUKOS 18). There were 398 respondents for ISAF 6, 189 for ISAF 7, 150 for BELUKOS 17 and 129 for BELUKOS 18. Morale was measured by a three items-scale: (1) "Are you satisfied with the relationships with your colleagues?", (2) "Are you satisfied with the relationships with your direct leader?", and (3) "Are you satisfied with the atmosphere within the group?". Respondents answered by means of a five-points scale, ranging from "very bad" (1) to "very good" (5). This scale captures only two components of morale as defined by Motowildo & Borman (1978): satisfaction and group cohesiveness.

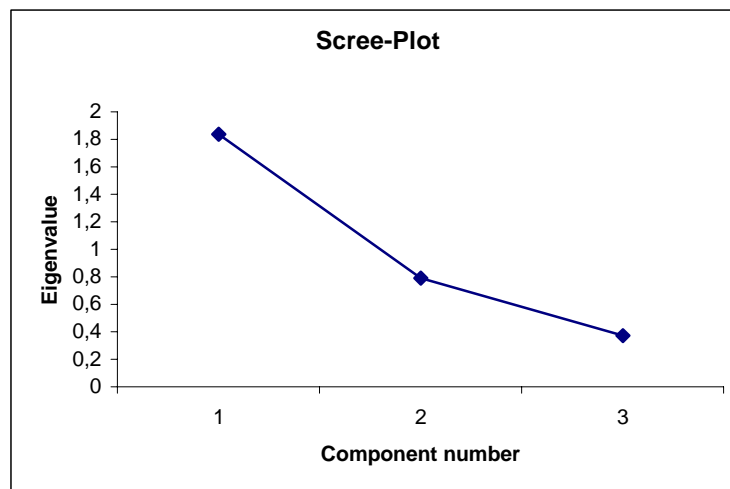
For our analyses we focused on socio-demographic data as independent variables. Items we retained for further analyses are presented here:

**Table 1: Socio-demographic items and their answer categories**

Item	Answer categories
1) To which personnel category do you belong?	1) private; 2) NCO; 3) Officer
2) What type of function do you have?	1) Combat; 2) Logistics/technician; 3) Administrative
3) What language do you speak?	1) French; 2) Dutch
4) How old are you?	1) Less than 25; 2) 25-44 ; 3) more than 44
5) Gender	1) Man; 2) Woman
6) Do you live in couple or do you have a stable relationship?	1) No; 2) Yes
7) Does your partner work?	1) No; 2) Yes
8) Do you have children?	1) No; 2) Yes
9) To how many long-term missions (of at least two months) did you participate?	
10) For this mission, did you volunteer or were you designated ?	1) I wanted to go and I was ; 2) I did not want to go and I was ; 3) I did everything I could to avoid to go, but I finally had to go
11) Did your designation pose problems to your family before departure?	1) No, not at all; 2) It was a problem for my family, but nothing serious; 3) It was a serious problem for them

### 3.0 RESULTS

A principal component analysis on the three items measuring morale revealed that one component described the data quite well, explaining 61.236% of the total variance in the data, with an eigenvalue of 1.837. The scree plot confirmed a one-factor solution. The Cronbach's alpha for this scale was 0.656.

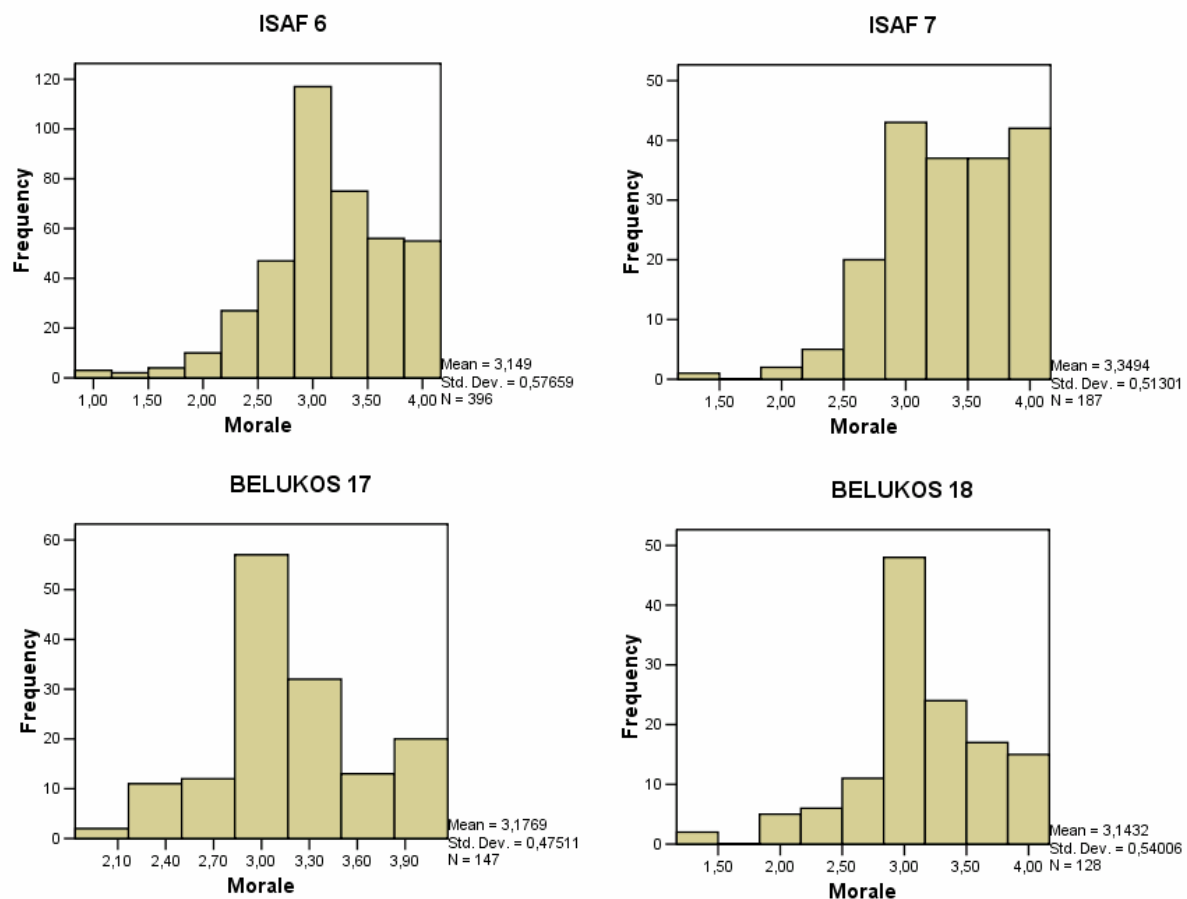


**Figure 1: Scree-plot of the eigenvalues**

**Table 2: Principal Component Analysis of the Morale items**

Item	Component
Are you satisfied with the atmosphere within the group?	0.862
Are you satisfied with the relationships with your colleagues?	0.852
Are you satisfied with the relationships with your direct leader?	0.607

We present now the histograms for the distribution of morale across the four contingents.



**Figure 2: Histograms for morale across the four contingents**

From the above figure, we clearly see that across the four PSO's, the morale of military personnel was mostly acceptable or even good to very good. Only a small percentage of them found their level of morale to be very bad or somewhat bad. Therefore, we can conclude that, globally, the morale of military personnel during these PSO's was quite good. An ANOVA on those data, via the multiple comparison

procedure, showed that only the average morale of ISAF 7 was significantly different from that of the other three missions. The level of morale in ISAF 7 ( $\bar{x} = 3.3494$ ) was higher than those of ISAF 6 ( $\bar{x} = 3.149$ ), BELUKOS 17 ( $\bar{x} = 3.1769$ ) and BELUKOS 18 ( $\bar{x} = 3.1432$ ).

In order to help commanders to detect which population is at higher risk, we calculate the Spearman correlations and perform a regression analysis between several socio-demographical variables and morale during the PSO.

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**Table 3: Spearman correlations between the socio-demographical variables and morale**

	Median /Mean	sd	Personnel category	Function	Language	Age	Gender	CSR	Partner work	Children	LTM	V/O	MPF	Morale
Personnel category	1.000		1.000											
Function	1.000		0.218**	1.000										
Language	2.000		0.083	0.074	1.000									
Age	2.000		0.129**	0.285**	-0.028	1.000								
Gender	1.000		-0.009	0.047	0.117*	-0.155**	1.000							
CSR	2.000		0.109*	0.054	-0.040	0.162**	0.035	1.000						
Partner work	2.000		0.104	0.101	0.047	0.095	0.068	0.073	1.000					
Children	1.000		-0.004	0.193**	-0.040	0.442**	-0.116*	0.323**	0.007	1.000				
LTM	3.000		-0.076	0.110*	-0.151**	0.390**	-0.099*	0.129*	0.074	0.286**	1.000			
V/O	1.000		-0.109*	0.002	0.073	0.088	0.088	0.061	0.011	0.090	0.027	1.000		
MPF	1.000		-0.001	-0.045	0.126*	-0.010	-0.011	0.158*	0.078	0.110*	-0.110*	0.230**	1.000	
Morale	3.197	0.547	-0.037	-0.017	0.044	-0.029	-0.044	0.065	-0.105	0.004	0.069	-0.001	-0.102*	1.000

Legend: CSR = Living in couple or stable relationship, LTM = How many long-term mission did you participated?, V/O = Were you voluntary or obliged to participate in this mission? MPF = Was the mission a problem for your family?

\*\* Correlation is significant at the 0.01 level (two-tailed); \* Correlation is significant at the 0.05 level (two-tailed)

As the reader can see from Table 3, most socio-demographic variables have non significant positive correlation with morale. Exception made of whether or not the mission was a problem for the family before departure ( $r = -0.102$ ,  $p\text{-value} < 0.05$ ), all the other socio-demographic variables were not significantly related to morale. Answer categories for this item (Did your designation posed problems to your family before departure?) were “1) No, not at all”, “2) It was a problem for my family, but nothing serious” and “3) It was a serious problem for them”. Therefore, we can interpret this negative correlation as: the more the military personnel estimated before the beginning of the mission that his/her departure would be a problem for the family, the less high the level of morale during the Crisis Response Operation.

**Table 4: Results of the multiple regression analysis**

Model	Unstandrardized beta	Unstandrardized Std. Error	Standardized beta	t	Sig.
(Constant)	4.075	0.506		8.048	0.000
Personnel category	-0.018	0.058	-0.019	-0.303	0.762
Function	-0.038	0.064	-0.037	-0.587	0.558
Language	0.096	0.074	0.080	1.299	0.195
Age	-0.066	0.077	-0.061	-0.853	0.395
Gender	-0.062	0.132	-0.029	-0.469	0.639
Couple or stable relationship	-0.215	0.225	-0.058	-0.957	0.340
Partner work	-0.114	0.078	-0.089	-1.469	0.143
Children	0.040	0.073	0.037	0.545	0.586
Number of missions	-0.004	0.014	-0.017	-0.273	0.785
Voluntary vs. obliged	0.047	0.105	0.028	0.452	0.652
Mission a problem for the family?	-0.193	0.060	-0.200	-3.189	0.002

Dependent variable: Morale

As shown in Table 4, only one socio-demographic indicator has still a significant effect on morale, controlled for the others. Whether or not the mission was a problem before departure was the only significant predictor of morale during the mission ( $\beta = -0.200$ , p-value < 0.01). Then, confirming the results obtained from the correlation analysis, results obtained from the multiple regression analysis suggest that the less the mission was a problem for the family before departure, the higher was the level of morale during the mission.

## 4.0 DISCUSSION AND CONCLUSION

The aim of this paper was to present a practical method for measuring morale used since 2005 in the Belgian armed forces. Three items in the standardized sociological questionnaires developed by the Department of Behavioral Sciences, when combined, form a morale scale fitting two dimensions proposed by Motowildo & Borman (1978): satisfaction and group cohesiveness. This scale is quite reliable, with a Cronbach's alpha of 0.656. Next, we showed that there were differences in morale scores across the four Belgian contingents studied. Then, we correlated socio-demographical indicators with morale, and showed that all of them were positively related to morale. All observed relationships were in the expected direction.



Both correlation analysis and the multiple linear regression revealed that only one socio-demographic indicator was significantly negatively related to morale: the fact that the mission was a problem for military personnel. The beta coefficient, as well as the correlation coefficient, indicate clearly that the less the mission is a problem for the family, the higher the level of morale during the mission.

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